



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
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CHICAGO, IL 60604-3590

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REPLY TO THE ATTENTION OF

Mr. Johnny W. Reising
United States Department of Energy
Feed Materials Production Center
P.O. Box 398705
Cincinnati, Ohio 45239-8705

SRF-5J

RE: South Field Phase II
Technical Specifications

Dear Mr. Reising:

The United States Environmental Protection Agency (U.S. EPA) has completed its review of the United States Department of Energy's (U.S. DOE) South Field extraction system phase II technical specifications.

This document provides technical specifications and drawings for installation of four extraction wells, an injection well, an injection pond, and for conversion of an existing extraction well into an injection well at South Field extraction system phase II.

Enclosed are U.S. EPA's comments on the technical specifications.

Please contact me at (312) 886-0992 if you have any questions regarding this matter.

Sincerely,

James A. Saric
Remedial Project Manager
Federal Facilities Section
SFD Remedial Response Branch #2

Enclosure

cc: Tom Schneider, OEPA-SWDO
Sally Robison, U.S. DOE-HDQ
Jamie Jameson, Fluor Fernald
Terry Hagen, Fluor Fernald
Tim Poff, Fluor Fernald

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 15060 Page #: Not applicable (NA) Line #: NA
Original General Comment #: 1

Commenting Organization: U.S. EPA
Section #: NA
Original General Comment #: 2
Comment: The specifications should be reviewed to be sure they
comply with the 2002 Ohio Basic Building Codes (OBBC) and
the Ohio Department of Transportation (ODOT) 2002
Construction and Material Specifications.

Commenting Organization: U.S. EPA
Section #: 01010
Original Specific Comment #: 1
Comment: A list of references for Section 01010 should be added to Article 1.4, References. Specifically, complete references should be listed for the Integrated System Construction Acceptance Test (ICAT) and the specific site procedures cited in this section, including MS-1001, ED-12-6003, and RM-0034.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 01010 Page #: 2 Line #: NA
Original Specific Comment #: 2
Comment: In Article 1.1.I, the citation of the OBBC should be
updated from the 1995 version to the 2002 version.

Commenting Organization: U.S. EPA
Section #: 01010
Original Specific Comment #: 3
Comment: The first line of Article 1.2.B states that four extraction wells will be added, but the last line of the paragraph states that three wells will be drilled and cased. The text should be revised to resolve this inconsistency.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 02110 Page #: 2 Line #: NA
Original Specific Comment #: 4
Comment: The section should be revised to address several issues. First, fugitive emissions should be primarily controlled with water. Consideration should be given to whether a chemical additive is really needed or if water would provide adequate fugitive emission control. Any chemical additive used should be non-petroleum-based, nonreactive with the site's chemicals of concern, and applied in accordance with manufacturer specifications. A chemical additive should not be used near any body of water or near any sensitive environments, such as Patty's Run.

Commenting Organization: U.S. EPA
Section #: 02200
Original Specific Comment #: 5
Comment: Articles 2.1.B, 2.1.C, and 2.1.D should consider stating that subsoil types S1, S2, and S3 must not contain any organic materials such as stems, roots, weeds, or animal remains.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 02200 Pages #: 6-8 Line #: NA
Original Specific Comment #: 6
Comment: In Article 3.2, the reference for compaction
specifications should be moved from Paragraph G to Paragraph
F.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 02200 Page #: 7 Line #: NA
Original Specific Comment #: 7
Comment: In Article 3.2.A.8, the text should be revised to
define "controlled density fill."

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 02200 Page #: 7 Line #: NA
Original Specific Comment #: 8
Comment: In Article 3.2.A.9, organic material should be
considered for addition to the list of materials to be
removed from an excavation.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 02200 Page #: 8 Line #: NA
Original Specific Comment #: 9
Comment: Article 3.2.D regarding fill over underground utilities and Drawing 95X-5500-G-02075 indicate Class "B" bedding (American Association of State Highway and Transportation Officials [AASHTO] T-99) conditions, which involve backfilling to the spring line. Because a flexible conduit must successfully interact with the surrounding soil to support its load, the type of backfill and method of placement used are more critical than the trench width or bedding. The type of backfill and method of placement used will depend on the properties of the piping selected (see Original General Comment 1). Generally, flexible piping should be supported by granular backfill conforming to ODOT Construction and Material Specifications 603 (such as A2 or A3 specified in Section 0200) to a point 1 foot above the pipe because PVC and HDPE piping does not have the long-term beam strength that steel or concrete has. All backfill within 1 foot of the piping is typically compacted using a vibrating-foot tamper or similar equipment to avoid damaging the piping. Article 3.2.D and Drawing 95X-5500-G-02075 should be reviewed and modified as necessary.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 02200 Page #: 8 Line #: NA
Original Specific Comment #: 10
Comment: In Article 3.2.E.4, consider revising the text to
state that topsoil must be rolled with a smooth-drum,
nonvibrating roller.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 02900 Page #: 1 Line #: NA
Original Specific Comment #: 11
Comment: In Article 1.1.A, the term "crusting agent" should be defined.

Commentor: Saric
Line #: NA

Comment: In Article 2.1.D, consider revising the text to state that the mulch binder should not be composed of chloride, lingo sulfonate, petroleum, or asphaltic emulsions. Also consider stating that, once cured, the mulch binder should be nontracking (that is, it should not stick to boots or tires). Article 2.1.d should be reviewed and modified as necessary.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 02900 Page #: 5 Line #: NA
Original Specific Comment #: 13

Commentor: Saric
Line #: NA

Comment: In Article 3.2.F., permanent slopes between 2H:1V and 3H:1V should be reviewed to assess whether slopes steeper than 2H:1V should be stabilized.

Commenting Organization: U.S. EPA
Section #: 09900
Original Specific Comment #: 14

Commentor: Saric
Line #: NA

Comment: Article 3.1.B should be revised to state that the electronic moisture meter should be designed for use with the type of material whose moisture content is to be measured. Required meter specifications should be listed in Article 2.2. Included in these specifications should be the meter's range of operation, the meter's accuracy, and a requirement for use of a pinless model. The specifications should also state what moisture content is considered to be "dry."

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 13400 Page #: 10 Line #: NA
Original Specific Comment #: 15

Commentor: Saric
Line #: NA

Comment: Article 3.2.B.1 should consider stating that only non-petroleum-based sealant compound may be used and PVC sealant compound should not be used.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 13400 Page #: 10 Line #: NA
Original Specific Comment #: 16

Commentor: Saric
Line #: NA

Comment: Article 3.2.B.3 should consider stating that prior to final construction of tubing to be connected to the instruments, every component must be cleaned by a method that complies with manufacturer specifications.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 15060 Page #: 8 Line #: NA
Original Specific Comment #: 17
Comment: Article 3.2.A should be reviewed to be sure it
 complies with ASME B34.3.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 16370 Page #: 10 Line #: NA
Original Specific Comment #: 18
Comment: Article 3.2.0 should be reviewed to consider whether
 other methods used to verify the area is free of underground
 obstructions may be used.

Drawings

Commenting Organization: U.S. EPA Commentor: Saric
Drawing #: 95X-5500-G-02067 Section #: NA
Original Specific Comment #: 19
Comment: The drawing should be reviewed to consider burying the
 piping from injection well 29 to the infiltration pond to at
 least frost depth, which is 3 feet below ground surface.

Commenting Organization: U.S. EPA Commentor: Saric
Drawing #: 95X-5500-G-02069 Section #: NA
Original Specific Comment #: 20
Comment: The drawing should be revised to tie in detail 9/-02075,
 which is not shown in the drawing.

Commenting Organization: U.S. EPA Commentor: Saric
Drawing #: 95X-5500-G-02071 Profile #: G
Original Specific Comment #: 21
Comment: Consider revising the drawing to show the piping 3
 feet below ground surface.

Commenting Organization: U.S. EPA Commentor: Saric
Drawing #: 95X-5500-G-02072 Profile #: J
Original Specific Comment #: 22
Comment: Consider revising the drawing to show the piping 3
 feet below ground surface. Also, the cross section should
 be extended to show where the piping ties into the
 infiltration pond.

Commenting Organization: U.S. EPA Commentor: Saric
Drawing #: 95X-5500-G-02074 Details #: 1 to 4
Original Specific Comment #: 23
Comment: The drawing should be revised to show the building
 dimensions in details 1 through 3. Also, detail 4 should
 show the type of cover to be used for the air bleed valve.